

OIPE

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/911,777

DATE: 08/01/2001
 TIME: 16:17:38

Input Set : A:\A070us.txt
 Output Set: N:\CRF3\08012001\I911777.raw

~~2~~ 2
 ENTERED

4 <110> APPLICANT: BIOGEN, INC.
 5 APOTECH S.A.
 6 BROWNING, Jeffrey
 7 AMBROSE, Christine
 8 MACKAY, Fabienne
 9 TSCHOPP, Jurg
 10 SCHNEIDER, Pascal
 12 <120> TITLE OF INVENTION: BAFF, Inhibitors Thereof and Their Use
 13 in the Modulation of B-Cell Response
 16 <130> FILE REFERENCE: A070 US
 C--> 18 <140> CURRENT APPLICATION NUMBER: US/09/911,777
 C--> 18 <141> CURRENT FILING DATE: 2001-07-24
 18 <150> PRIOR APPLICATION NUMBER: 60/117,169
 19 <151> PRIOR FILING DATE: 1999-01-25
 21 <150> PRIOR APPLICATION NUMBER: 60/143,228
 22 <151> PRIOR FILING DATE: 1999-07-09
 24 <150> PRIOR APPLICATION NUMBER: PCT/US00/01788
 25 <151> PRIOR FILING DATE: 2000-01-25
 27 <160> NUMBER OF SEQ ID NOS: 22
 29 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 31 <210> SEQ ID NO: 1
 32 <211> LENGTH: 218
 33 <212> TYPE: PRT
 34 <213> ORGANISM: Homo Sapien
 36 <400> SEQUENCE: 1
 37 Met Asp Asp Ser Thr Glu Arg Glu Gln Ser Arg Leu Thr Ser Cys Leu
 38 1 5 10 15
 39 Lys Lys Arg Glu Glu Met Lys Leu Lys Glu Cys Val Ser Ile Leu Pro
 40 20 25 30
 41 Arg Lys Glu Ser Pro Ser Val Leu Leu Ser Cys Cys Leu Thr Val Val
 42 35 40 45
 43 Ser Phe Tyr Gln Val Ala Ala Leu Gln Gly Asp Leu Ala Ser Leu Arg
 44 50 55 60
 45 Ala Glu Leu Gln Gly His His Ala Glu Lys Leu Pro Ala Gly Ala Lys
 46 65 70 75 80
 47 Ile Phe Glu Pro Pro Ala Pro Gly Glu Gly Asn Ser Ser Gln Asn Ser
 48 85 90 95
 49 Arg Asn Lys Arg Ala Val Gln Gly Pro Glu Glu Thr Val Thr Gln Asp
 50 100 105 110
 51 Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr Ile Gln Lys Gly
 52 115 120 125
 53 Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Ser Ala
 54 130 135 140
 55 Leu Tyr Gly Gln Val Leu Tyr Thr Asp Lys Thr Tyr Ala Met Gly His
 56 145 150 155 160
 57 Leu Ile Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu
 58 165 170 175

RAW SEQUENCE LISTING

DATE: 08/01/2001

PATENT APPLICATION: US/09/911,777

TIME: 16:17:38

Input Set : A:\A070us.txt

Output Set: N:\CRF3\08012001\I911777.raw

```

59 Val Thr Leu Phe Arg Cys Ile Gln Asn Leu Glu Glu Gly Asp Glu Leu
60      180      185      190
61 Gln Leu Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Leu Asp Gly Asp
62      195      200      205
63 Val Thr Phe Phe Gly Ala Leu Lys Leu Leu
64      210      215
66 <210> SEQ ID NO: 2
67 <211> LENGTH: 232
68 <212> TYPE: PRT
69 <213> ORGANISM: Murine
71 <400> SEQUENCE: 2
72 Met Asp Glu Ser Ala Lys Thr Leu Pro Pro Pro Cys Leu Cys Phe Cys
73 1      5      10      15
74 Ser Glu Lys Gly Glu Asp Met Lys Val Gly Tyr Asp Pro Ile Thr Pro
75      20      25      30
76 Gln Lys Glu Glu Gly Ala Val Leu Leu Ser Ser Ser Phe Thr Ala Met
77      35      40      45
78 Ser Leu Tyr Gln Leu Ala Ala Leu Gln Ala Asp Leu Met Asn Leu Arg
79      50      55      60
80 Met Glu Leu Gln Ser Tyr Arg Gly Ser Ala Thr Pro Ala Ala Ala Lys
81 65      70      75      80
82 Leu Leu Thr Pro Ala Ala Pro Arg Pro His Asn Ser Ser Arg Gly His
83      85      90      95
84 Arg Asn Arg Arg Ala Phe Pro Gly Pro Glu Glu Thr Glu Gln Asp Val
85      100      105      110
86 Asp Leu Ser Ala Pro Pro Ala Leu Arg Asn Ile Ile Gln Asp Cys Leu
87      115      120      125
88 Gln Leu Ile Ala Asp Ser Asp Thr Pro Thr Ile Arg Lys Gly Thr Tyr
89      130      135      140
90 Thr Phe Val Pro Trp Leu Leu Ser Phe Lys Arg Gly Asn Ala Leu Tyr
91 145      150      155      160
92 Ser Gln Val Leu Tyr Thr Asp Pro Ile Phe Ala Met Gly His Val Ile
93      165      170      175
94 Gln Arg Lys Lys Val His Val Phe Gly Asp Glu Leu Ser Leu Val Thr
95      180      185      190
96 Leu Phe Arg Cys Ile Gln Asn Leu Glu Glu Gly Asp Glu Ile Gln Leu
97      195      200      205
98 Ala Ile Pro Arg Glu Asn Ala Gln Ile Ser Arg Asn Gly Asp Asp Thr
99      210      215      220
100 Phe Phe Gly Ala Leu Lys Leu Leu
101 225      230
103 <210> SEQ ID NO: 3
104 <211> LENGTH: 102
105 <212> TYPE: PRT
106 <213> ORGANISM: Homo Sapien
108 <400> SEQUENCE: 3
109 Val Thr Gln Asp Cys Leu Gln Leu Ile Ala Asp Ser Glu Thr Pro Thr
110 1      5      10      15
111 Ile Gln Lys Gly Ser Tyr Thr Phe Val Pro Trp Leu Leu Ser Phe Lys

```

RAW SEQUENCE LISTING

DATE: 08/01/2001

PATENT APPLICATION: US/09/911,777

TIME: 16:17:38

Input Set : A:\A070us.txt

Output Set: N:\CRF3\08012001\I911777.raw

```

112          20          25          30
113 Arg Gly Ser Ala Leu Glu Glu Lys Tyr Gly Gln Val Leu Tyr Thr Asp
114          35          40          45
115 Lys Thr Tyr Ala Met Gly His Leu Ile Gln Arg Lys Lys Val His Val
116          50          55          60
117 Phe Gly Asp Glu Leu Ser Asn Asn Ser Cys Tyr Ser Ala Gly Ile Ala
118 65          70          75          80
119 Lys Leu Glu Glu Gly Asp Glu Leu Gln Leu Ala Ile Pro Arg Glu Asn
120          85          90          95
121 Ala Gln Ile Ser Leu Asp
122          100
124 <210> SEQ ID NO: 4
125 <211> LENGTH: 96
126 <212> TYPE: PRT
127 <213> ORGANISM: Homo Sapien
129 <400> SEQUENCE: 4
130 Lys Gln His Ser Val Leu His Leu Val Pro Ile Asn Ala Thr Ser Lys
131 1          5          10          15
132 Asp Asp Ser Asp Val Thr Glu Val Met Trp Gln Pro Ala Leu Arg Arg
133          20          25          30
134 Gly Arg Gly Leu Gln Ala Gln Tyr Ser Gln Val Leu Phe Gln Asp Val
135          35          40          45
136 Thr Phe Thr Met Gly Gln Val Val Ser Arg Glu Gly Gln Gly Arg Ala
137          50          55          60
138 Tyr Asn Ser Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp
139 65          70          75          80
140 Ile Leu Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser
141          85          90          95
143 <210> SEQ ID NO: 5
144 <211> LENGTH: 104
145 <212> TYPE: PRT
146 <213> ORGANISM: Homo Sapien
148 <400> SEQUENCE: 5
149 Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro Gln Ala Glu Gly
150 1          5          10          15
151 Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu Leu Ala Asn Gly
152          20          25          30
153 Val Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly Cys Pro Ser Thr His
154          35          40          45
155 Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr
156          50          55          60
157 Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Gly
158 65          70          75          80
159 Val Phe Gln Leu Glu Lys Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg
160          85          90          95
161 Pro Asp Tyr Leu Asp Phe Ala Glu
162          100
164 <210> SEQ ID NO: 6
165 <211> LENGTH: 97

```

RAW SEQUENCE LISTING

DATE: 08/01/2001

PATENT APPLICATION: US/09/911,777

TIME: 16:17:38

Input Set : A:\A070us.txt

Output Set: N:\CRF3\08012001\I911777.raw

```

166 <212> TYPE: PRT
167 <213> ORGANISM: Homo Sapien
169 <400> SEQUENCE: 6
170 Glu Leu Arg Lys Val Ala His Leu Thr Gly Lys Ser Asn Ser Arg Ser
171 1 5 10 15
172 Met Pro Leu Glu Trp Glu Asp Thr Tyr Gly Ile Val Leu Leu Ser Gly
173 20 25 30
174 Val Lys Tyr Ser Lys Val Tyr Phe Arg Gly Gln Ser Cys Asn Asn Leu
175 35 40 45
176 Pro Leu Ser His Lys Val Tyr Met Arg Asn Ser Lys Tyr Pro Gln Met
177 50 55 60
178 Trp Ala Arg Ser Ser Tyr Leu Gly Ala Val Phe Asn Leu Thr Ser Ala
179 65 70 75 80
180 Asp His Leu Tyr Val Asn Val Ser Glu Leu Ser Leu Val Asn Phe Glu
181 85 90 95
182 Glu
185 <210> SEQ ID NO: 7
186 <211> LENGTH: 102
187 <212> TYPE: PRT
188 <213> ORGANISM: Homo Sapien
190 <400> SEQUENCE: 7
191 Thr Leu Lys Pro Ala Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn
192 1 5 10 15
193 Ser Leu Leu Trp Arg Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly
194 20 25 30
195 Phe Tyr Ser Gln Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys Ala
196 35 40 45
197 Thr Ser Ser Pro Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser Ser
198 50 55 60
199 Gln Tyr Pro Phe Pro Trp Leu His Ser Met Tyr His Gly Ala Ala Phe
200 65 70 75 80
201 Gln Leu Thr Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly Ile Pro
202 85 90 95
203 His Leu Val Leu Ser Phe
204 100
206 <210> SEQ ID NO: 8
207 <211> LENGTH: 109
208 <212> TYPE: PRT
209 <213> ORGANISM: Homo Sapien
211 <400> SEQUENCE: 8
212 Glu Ala Gln Pro Phe Ala His Leu Thr Ile Asn Ala Thr Asp Ile Pro
213 1 5 10 15
214 Ser Gly Ser His Lys Val Ser Leu Ser Trp Tyr His Asp Arg Gly
215 20 25 30
216 Trp Gly Lys Ile Ser Asn Met Tyr Ala Asn Ile Cys Phe Arg His His
217 35 40 45
218 Glu Thr Ser Gly Asp Leu Ala Thr Glu Tyr Leu Gln Leu Met Val Tyr
219 50 55 60
220 Val Thr Lys Thr Ser Ile Lys Ile Pro Ser Glu Phe His Phe Tyr Ser

```

RAW SEQUENCE LISTING

DATE: 08/01/2001

PATENT APPLICATION: US/09/911,777

TIME: 16:17:38

Input Set : A:\A070us.txt

Output Set: N:\CRF3\08012001\I911777.raw

221	65	70	75	80	
222	Ile Asn Val Gly Gly Phe Phe Lys Leu Arg Ser Gly Glu Glu Ile Ser				
223		85	90	95	
224	Ile Glu Val Ser Asn Pro Ser Leu Leu Asp Pro Asp Gln				
225		100	105		
227	<210> SEQ ID NO: 9				
228	<211> LENGTH: 26				
229	<212> TYPE: DNA				
230	<213> ORGANISM: Homo Sapien				
232	<400> SEQUENCE: 9				
233	actgtttctt ctggaccctg aacggc				26
235	<210> SEQ ID NO: 10				
236	<211> LENGTH: 30				
237	<212> TYPE: DNA				
238	<213> ORGANISM: Homo Sapien				
240	<400> SEQUENCE: 10				
241	gacaagcttg ccaccatgga tgactccaca				30
243	<210> SEQ ID NO: 11				
244	<211> LENGTH: 23				
245	<212> TYPE: DNA				
246	<213> ORGANISM: Homo Sapien				
248	<400> SEQUENCE: 11				
249	actagtcaca gcagtttcaa tgc				23
251	<210> SEQ ID NO: 12				
252	<211> LENGTH: 22				
253	<212> TYPE: DNA				
254	<213> ORGANISM: Homo Sapien				
256	<400> SEQUENCE: 12				
257	ctgcagggtc cagaagaaac ag				22
259	<210> SEQ ID NO: 13				
260	<211> LENGTH: 24				
261	<212> TYPE: DNA				
262	<213> ORGANISM: Homo Sapien				
264	<400> SEQUENCE: 13				
265	ggagaaggca actccagtca gaac				24
267	<210> SEQ ID NO: 14				
268	<211> LENGTH: 24				
269	<212> TYPE: DNA				
270	<213> ORGANISM: Homo Sapien				
272	<400> SEQUENCE: 14				
273	caattcatcc ccaaagacat ggac				24
275	<210> SEQ ID NO: 15				
276	<211> LENGTH: 22				
277	<212> TYPE: DNA				
278	<213> ORGANISM: Homo Sapien				
280	<400> SEQUENCE: 15				
281	tcggaacaca acgaaacaag tc				22
283	<210> SEQ ID NO: 16				
284	<211> LENGTH: 26				

VERIFICATION SUMMARY

DATE: 08/01/2001

PATENT APPLICATION: US/09/911,777

TIME: 16:17:39

Input Set : A:\A070us.txt

Output Set: N:\CRF3\08012001\I911777.raw

L:18 M:270 C: Current Application Number differs, Replaced Current Application No

L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date